

REMARKS

Reconsideration of this application is requested.

Claims 1-17 remain pending for consideration. Claim 1 has been amended to emphasize novel aspects of the applicants' invention. More particularly, claim 1 has been amended to specify that the blocking layer prevents conduction and movement of charge into the electroluminescent layer. This is done, according to the further amendment of claim 1, by printing with an ink that prevents conduction and movement of charge into the electroluminescent layer. Basis for the amendments to claim 1 is found throughout the applicants' disclosure. See, for example, page 1, lines 16-23.

The applicants request reconsideration of the Section 102(e) rejection of claims 1, 3-4, 6 and 16 based on Sotoyama et al. and the various Section 103(a) rejections of the other claims based on combinations of Sotoyama et al. with one or more secondary references (Pennaz, Morii, Narang, Hyman, Murasko et al., Jaqannathan and Hanson).

Briefly stated, Sotoyama et al. do not disclose or suggest the applicants' method as defined in amended claim 1. Hence the Section 102(e) rejection of claims 1, 3-4, 6 and 16 based on Sotoyama et al. should be withdrawn. The secondary references do not fill in the substantive deficiencies of Sotoyama et al. relative to the applicants' method as defined in claim 1. As all of the other claims depend, directly or indirectly from claim 1, it is submitted that all of the applicants' claims define subject matter which is novel and otherwise unobvious from the Examiner's references.

More specifically, the applicants note that the blocking layer referred to in claim 1 of the applicants' invention has the function of blocking conduction, i.e. movement of (any type of) charge into the electroluminescent (EL) layer. As a consequence, the applicants' blocking layer creates a contrast in the image displayed by the EL layer (see page 1, lines 16-19 of applicants' specification), as there is no emission in the regions where it is printed. The contrast can further be increased or altered by using a colored ink (see page 1, lines 19-23).

The applicants' blocking layer and its purpose are different from conventional hole or electron blocking layers as typically used in OLEO devices. These layers block only movement of one type of charge, i.e. either negative charge (electrons) or positive charge (holes), but will allow movement of the opposite type of charge into the EL layer. These layers, therefore, do not completely block conduction and movement of charge. Furthermore, the purpose of these layers is to enhance injection of one type of

charge from each direction into the EL layer and prevent recombination of positive and negative charges outside the EL layer, in order to improve the light-emitting efficiency. They will not, therefore, create a contrasting image by preventing emission in the regions where they are applied, but will instead increase the luminence.

Such hole or electron blocking layers can also be used in the OLED device of the applicants' invention. However, this would only be in addition to the applicants' blocking layer. The key point is that the hole or electron blocking layers are clearly different from the applicants' blocking layer as called for in claim 1. See page 4, lines 19-22 of applicants' specification, where it is clearly disclosed that an electron blocking layer (i.e. hole injection electrode) or a hole blocking layer (i.e. electron injection electrode) constitutes an "OLED layer", but not the "blocking layer" as required by the applicants for the method of claim 1.

Likewise, the hole transport layer disclosed in paragraph [0110] of Sotoyama, as mentioned by the Examiner on page 2 and 3 of the action, will block only electrons (negative charges) but will transport holes (positive charges), and does not, therefore, completely prevent conduction and movement of charges. The hole transport layer of Sotoyama et al. is, therefore, different from the blocking layer called for by the applicants.

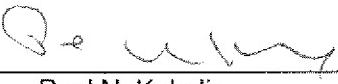
To summarize, the applicants' method as defined in claim 1, as amended, is clearly novel over Sotoyama et al. Furthermore, neither Sotoyama nor any other of the cited references discloses or suggests the use of a patterned blocking layer, which prevents conduction and movement of charge into the EL layer and thereby creates a contrast in the image. It is, therefore, submitted that the applicants' method is not only new but also unobvious from the art relied on by the Examiner. In the circumstances, withdrawal of the Section 102(e) and several Section 103(a) rejections, with allowance of the claims, is thought to be in order and is requested.

Detailed comment on the secondary references is not considered necessary in the present circumstances.

Favorable action is requested.

Respectfully submitted,

MORGAN LEWIS & BOCKIUS LLP

By 
Paul N. Kokulis
Reg. No. 16773

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Customer No. 09629
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Phone: (202) 739-3000
Facsimile: (202) 739-3001
Direct: (202) 739-5455